

CLAIMS:

1. A washer comprising wadding material and having an aperture extending therethrough, characterised in that the wadding material is permanently compressed at least around the periphery of the aperture to impart sufficient elasticity to the modified wadding material such that, when fitted to upholstery together with a tuft, the dimensions of the aperture may increase sufficiently to accommodate engagement means for the tuft and then return to a resting state after disengagement of the engagement means for the tuft so as to prevent disengagement of the tuft.
2. A washer according to claim 1, wherein the wadding material contains fusible material.
3. A washer according to claim 2, wherein the wadding material containing fusible material is compressed and/or fused at least around the periphery of the aperture.
4. A washer according to any one of claims 1 to 3, wherein an area immediately surrounding the aperture is uncompressed.
5. A washer according to any one of claims 1 to 4, associated with at least one further such washer.
6. A washer according to claim 5, connected in series to at least one further such washer.
7. A washer according to any one of claims 1 to 6, wherein the aperture is provided by one or more cuts in the washer.
8. A washer according to claim 7, wherein the aperture is provided by two cuts in the form of a cross.
9. A method of manufacturing a washer from wadding material, the method comprising, in any order, the following steps (a) to (c):
 - (a) permanently compressing the wadding material at least in a region intended to form the aperture of the washer and its periphery;

(b) forming an aperture extending through the compressed region of the material, the material being compressed around the periphery of the aperture; and
(c) separating the washer from the wadding material;
so that the compressed wadding material of the washer exhibits sufficient elasticity at least around the periphery of the aperture such that, when the washer is fitted to upholstery together with a tuft, the dimensions of the aperture may increase sufficiently to accommodate engagement means for the tuft and then return to a resting state after disengagement of the engagement means for the tuft so as to prevent disengagement of the tuft.

10. A method according to claim 9, wherein the wadding material contains fusible material.

11. A method according to claim 10, wherein step (a) comprises compression and/or fusion of the wadding material containing fusible material, such that the washer is compressed and/or fused around the periphery of the aperture.

12. A method according to any one of claims 9 to 11, wherein steps (a) and (b) occur substantially simultaneously.

13. A method according to any one of claims 9 to 12, wherein step (a) is carried out so as to leave an area immediately surrounding the aperture unmodified.

14. A method according to any one of claims 9 to 13, carried out continuously to produce a washer associated with one or more further such washers.

15. A method of automatically tufting upholstery, the method including engaging, and correctly placing in its supporting position, at least one washer as defined in any one of claims 1 to 8.

16. A method according to claim 15, said method additionally including the following steps:

providing a tuft, said tuft comprising a retaining link with a tuft element at either end and being supplied from a plurality of associated tufts;

engaging the tuft in engagement means;
separating the engaged tuft from the associated tufts;
driving the engagement means, together with one tuft element and the retaining link of the engaged tuft through an upholstery unit;
releasing the engaged tuft;
withdrawing the engagement means; and
automatically reloading the engagement means with a further tuft.

17. Apparatus for carrying out the method of claim 15 or claim 16.

18. Apparatus according to claim 17, comprising:

engagement means for a tuft, said tuft being supplied from a plurality of associated tufts;
means for separating the engaged tuft from the associated tufts;
means for driving the engagement means, together with one tuft element and the retaining link of the engaged tuft, through an upholstery unit and withdrawing the engagement means once the tuft is released;
means for automatically reloading the engagement means with a further tuft; and
means for engaging and correctly placing in its supporting position at least one washer as defined in any one of claims 1 to 8.

19. Apparatus according to claim 18, wherein the means for engaging and correctly placing the at least one washer in its supporting position comprise feed means arranged for cooperation with the automatic tufting apparatus.

20. Upholstery fitted with at least one washer as defined in any one of claims 1 to 8.

21. Upholstery tufted by the method of any one of claims 15 or 16 and/or the apparatus of any one of claims 17 to 19.

22. A washer substantially as described and illustrated herein with reference to the accompanying Figs. 8a, 8b, 9 and 12.

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23. A method of manufacturing a washer from wadding material substantially as described and illustrated herein with reference to the accompanying Figs. 10a, 10b and 10c.
24. A method of automatically tufting upholstery substantially as described and illustrated herein.
25. Apparatus for automatically tufting upholstery substantially as described and illustrated herein.
26. Upholstery substantially as described and illustrated herein with reference to the accompanying Fig. 11.